When Competence Matters: Professionals with Disabilities in the ICT Sector

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Abstract

The objective of this study was to analyze the full-time careers of 21 highly educated persons with a physical and/or sensory disability (PWD). We focused on factors in the early phases of the PWD's careers after graduation, as well as their work orientations within the information and communication technology (ICT) sector. Data were gathered using semi-structured interviews. In this qualitative research, inductive content analysis was used. The study revealed the importance of two types of competence: the ability to create networks and technical expertise at the beginning of one's career. We also classified five work orientations: novice, technical, research, management, and entrepreneur. Difficulties related to disability or gender made no difference in these orientations.

1. Introduction

The aim of this study was to determine how highly educated persons with a physical and/or sensory disability (PWD) become employed in the information and communication technology (ICT) field and how they orient themselves once employed. Instead of focusing purely on information systems (IS) research and their purpose (see e.g. [1]), the study focused on PWD in the ICT field.

Employment rates for people with disabilities tend to be lower compared to those of the general population [2-4]. In Norway, the employment rates for PWD have not improved since 2000, leading to the creation of tools for describing and analyzing the situation. The outcome was the design of a simulation model for use by policymakers and other organizations to increase the employment of PWD [5].

In terms of gaining employment, networks, competence, and a favorable economic situation are seen as factors that help these individuals [6]. This finding is in line with findings that suggest better educated PWD have a higher likelihood of finding a job than PWD with less education. The crucial elements are flexibility, adjustment, and possibilities of changing jobs [7]. PWD and their success in finding employment were analyzed in the early 2000s, in particular the career development of high-achieving women with disabilities, based on interviews with 17 successful women. The study was realized in a theoretical model that describes a system of influences that were identified in the authors' analysis. In the study, education was an influential factor in career development [8]. Furthermore, combined internal and external factors influence educational institutions chosen by PWD. For example, one combined factor was the approach of viewing a disability as a part of one's personality, not a weakness. High self-efficacy and educational success were mentioned as internal factors, while support from family and individual teachers and inclusive school settings were viewed as external factors [9]. Another study of highly educated men with disabilities (n = 9) in the ICT sector revealed that a disability is not by itself a barrier to employment [10]. In a later study, disabilities of highly educated female ICT professionals (n = 8) were similarly not seen as limitations [11].

The current paper represents an attempt to uncover the factors behind the successful employment of PWD, with a focus on positive factors in the early phases of these individuals' careers immediately after graduation, as well as the possibilities the ICT sector can offer. By focusing on the transition from graduation to the first workplace, we aimed to fill the existing research gap. The research problem was solved with the help of two questions: The first was related to determining the factors leading to the employment of PWD in the ICT sector post-graduation, and the second regarded an examination of the work orientations in PWD's careers. In this study, the concept of work orientation described what kind of work tasks PWD can carry out.

This research was based on the content analysis of semi-structured interviews with 21 highly educated PWD. In this study, highly educated meant a bachelor's degree or higher. All participants worked or had worked full-time in the ICT sector. The questions focused on, for example, disability, education, and work experience.

Through this study, we want to encourage young PWD and ICT sector employers to see the wide range of work possibilities offered by the field, even if the candidate has some physical and/or sensory limitations.

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The structure of this paper follows a formal procedure. The next section is a literature review, which leads to the theme of PWD's access to work and their actions in their career. Then, we present the research approach (Section 3) before we describe the empirical study (Section 4). Finally, Section 5 offers a discussion and conclusion.

2. Literature review

As a field of science, IS are being contributed by being proactive in defining its domain, adding value to students in the discipline, being proactive members of IS faculty, being aggressive in adding value to IS practice, and producing graduates prepared for a productive career. Furthermore [12,13], the field can be approached from various contexts, such as physical, content, discipline, professional, and life, that can draw students with different cultural and social backgrounds and make it tempting for all types of people.

The ICT sector is evolving rapidly as shown by the increased number of users, content, and utilized technologies. This rapid evolution is realized, for example, as new needs for professionals in the ICT sector, challenges to meet expected timelines, and demands to reorganize working processes [14].

Increased networking and information and communication requirements easily produce uncertainty if not managed properly [14], and the capability of and readiness to utilize existing ICT are valued [15]. One reason for the problems in communication can be identified as a sign of the digital divide that is defined as a socioeconomic perspective or realized lack of access to computers and networking due to diverse reasons [15].

Disability as a concept is vague, and its definition seems to vary in surveys and official data sources [16]. In understanding disability and functioning, there are different models, such as the medical and social models of disability. In the medical model, disability is seen as a problem of an individual caused by some health condition. In the social model, the possible problems are socially created. The World Health Organization (WHO) delineated that disability covers impairments, activity limitations, and participation restrictions, and disability reflects the interaction between features of a person's body and features of the society in which an individual lives [17].

Before 2000, the placement of PWD in the workplace was based on matching workers' abilities and the essential functions of the task at hand. In addition, disability may have been addressed directly or indirectly when defining the work location for PWD [18].

From a productivity point of view, employment of people with disabilities matters. In Organisation for Economic Co-operation and Development (OECD) countries, the exclusion of people with disabilities has drawn attention for many decades [19]. One example of such interest is a 20-year development program in Sweden [20], which showed that PWD experienced serious challenges in breaking into the workforce without assistance activities. Due to the actions of the Swedish government and the Swedish Labour Market Board, about 4000 jobs for people with disabilities emerged. The authors also noted that some of the program's outcomes led to sustained success, even if many diminished with time.

In Norway, a simulation model was aimed at covering the factors that would help PWD gain employment. The model was intended to encourage employers to recruit PWD and to provide decision-makers with a tool for constructing "what-if" scenarios for such hires. The model was also geared toward supporting more focused discussions relating to, among other things, disability organizations and policymakers [5].

When it comes to access to the community, social capital [21-23] is a valuable resource. Within the family, social capital offers a range of possibilities by showing different networks. Kim and Schneider [24] reported on the web of expectations with which children are surrounded, which address their ambitions for attaining status.

For young people with a disability, also their peers, family, and social network can act against the idea of finding a job [25]. In addition, the severity, type, and duration of the disability, level of education, gender, income bracket, geographic location, and the number of people living in the household can all pose barriers to working [26]. Workplace and employer discrimination and labeling have been seen as primary factors that impede the participation of people with disability in the labor market [27].

An increasing number of PWD have expressed their desire to attain higher education that could offer them a better chance of getting employed. Several institutional resources have enabled people with learning difficulties or other disabilities to attend higher educational institutions [28].

The Finnish education system is built on the principles of lifelong learning. Since the beginning of the 1970s, there has been one free-of-charge basic education system for all children [29-31]. In Finland, actions that support PWD in getting an education are backed by the government, which is committed to equality and access to education for all. These government efforts to support education are independent of age or disabilities, and in a similar way to counterparts without

disabilities, PWD are encouraged to foster their autonomy and social participation through education [32].

The importance of higher education was also emphasized in a study of educational inequalities regarding PWD's ability to work; this study revealed that education is associated with job flexibility, which is highly valuable for PWD. Baumberg [7] determined that better-educated people enjoy more flexibility in work than those less qualified. In addition, if individuals lack qualifications, they are not hired even if they could perform the tasks despite their disabilities or impairments.

Related to educational inequalities, the experiences of women working in IT professions were studied in seven European countries. Some of the respondents were from rural areas, as well as areas with high unemployment rates. For these women, IT represented a trajectory from the margins to a field of opportunities. Work offered independence and was challenging, bringing the possibility to learn and be creative [33].

Women with disabilities were also the focus of a study that produced a conceptual model of influences to describe the career development experiences of successful women who had physical or sensory disabilities [8].

Meanwhile, a study by Smith and Arnett [34] focused on the differences between three groups of people with multiple sclerosis (MS): those in full-time employment, those with reduced work hours, and those who were unemployed due to their symptoms. The group who had reduced their work hours had significantly more years of education and higher occupational prestige ratings than the unemployed group. The researchers posited that due to this advantage, this group may have had more latitude to reduce their hours or to reconfigure their positions to adapt to their disease.

Information technology (IT) as a new field of employment for PWD was reported in a study that investigated whether injured military veterans could see themselves becoming IT professionals. The study revealed that some of the respondents thought that IT could be ideal for people with, for example, a hearing disability, while others saw such a condition as a barrier. To sum up, the participants showed a strong interest in IT due to their experience gained in the military [35].

In another study, "demand-side employment research" was introduced focusing on empirically supported interventions that improve opportunities to return to work for people who have been injured at work and other PWD. The study emphasized the relationships between the factors of employers' practices and the hiring of PWD, and proposed that more resources be put into incorporating demand-side strategies in vocational rehabilitation and return-to-work interventions for PWD [36].

It appears that several programs have been initiated to further the employment of PWD in workplaces that are available in the open labor force. Measures to strengthen PWD's self-confidence, individualized and holistic advisory procedures, opportunities and education, and a close fit between the strengths and interests of PWD and employment opportunities have been identified as success factors for gaining employment [37]. In Finland, the labor market has been less accommodating of PWD than others. To address this issue, the Ministry of Employment and the Economy has proposed actions to help PWD seeking employment [32].

When a person has a disability, the issue of whether to mention the disability before a job interview might arise. Regarding this, Lindsay and DePape [38] studied mock job interviews of young people with and without disabilities. There were similarities and differences between the two groups. Both gave examples from school and emphasized their communication skills. They also gave examples of relevant experience for the position. Both groups gave similar examples of what they were proud of, although the young PWD gave fewer examples. Differences between the groups were seen by the second group disclosing their condition, giving fewer examples of customer-facing and teamwork skills, experiencing greater challenges in providing feedback to team members, and responding to scenario-based problem-solving questions. The young PWD also gave fewer examples from past work-based, volunteer, and extra-curricular activities. In conclusion, the researchers suggested that young people with disabilities need guidance to understand their marketable skills and how to highlight them in an interview.

When PWD are trying to secure a job interview, they may experience a moral dilemma over whether "to tell or not to tell" about the disability. On one hand, it seems fair to tell the employer at the application stage; on the other, they may worry that such a disclosure would lose their chance of getting an interview. If the disability appears to be a surprise to the interviewer, there comes a moment when the candidate must face possible confusion or prejudice. The optimum scenario is that the disability is already known and the applicant is asked in a job interview [6].

From the employer's point of view, a disability has been seen as an asset when evaluating the social responsibility of their business, and employing PWD is a sign of good public relations, revealing disability-friendly values that are visible in the organization [18].

In addition, based on Banks and Lawrence's [39] results, PWD can perform non-manual work tasks to a better standard and for longer durations than the manual variety. They also noted that even if employment can cause additional stress for PWD, and therefore, retirement is a reasonable choice, the employment of PWD should be supported for people who are eligible for the sake of social inclusion and enhanced quality of health.

As a summary, the key concepts related to PWD in the ICT sector are presented in Figure 1.

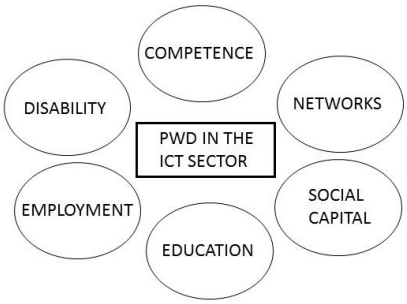

Figure 1. The theoretical framework.

3. Research approach

The current study is qualitative research; the empirical research material was acquired through interviews and subjected to a content analysis.

Researchers are obligated to take into account the following factors when selecting their research method: research purposes, questions, existing information, and an epistemological perspective [40]. When the focus is on organizational and social phenomena, and if the data include interviews and documents, qualitative research is the right choice [41]. Originally, qualitative research methods were developed to serve researchers studying social and cultural phenomena and to help researchers understand people and the social and cultural context in which they live [42].

In this study, qualitative research was applied by following certain principles and taking a critical approach, as recommended by Myers and Klein [43]. According to these authors, the principles guide researchers to apply core concepts, take a value-based position, reveal prevailing beliefs and social practices, note individual emancipation, point out improvements in society, and seek improvements through social theories. Likewise, in qualitative research, a suitable sample size is required to effectively answer the research question [44].

When conducting interviews, equity is important as it reduces possible hierarchical states. Briefly, the relationship between interviewee and interviewer should be fair and just [45]. Interviewers must take into account ethical issues, such as shared access, transcriptions, and interviewees' identity [46].

For this qualitative study, inductive content analysis was used. In such an analysis, researchers can infer meanings in data by drawing and coding conclusions [47]. The research question affects the selected groups [48]. When a phenomenon is under-studied and the data are fragmented, an inductive content analysis is the proper approach [49].

In this study, we used various channels to find appropriate interviewees, including social media, different types of disability forums, such as journals, and our own network. Some interviewees also told their friends about the study, who then contacted the first author. All PWD who had higher education and work experience in the ICT field were accepted for interviews.

The semi-structured interviews were conducted in three different sets (nine interviews with men, eight interviews with women, and four interviews with men) between 2013 and 2015 by the first author. Before the interviews took place, the first author sent the questions to the interviewees. The questions were based on previous literature and covered matters such as education, disability, and career.

Most of the interviews took place face-to-face or via Skype; all were audio-recorded. The interviews lasted about 30-45 minutes each. Respondents gave consent for recording before the interviews and were told that only the first and third authors would hear the recordings. Two interviewees responded to the questions via e-mail.

The recorded interviews were transcribed by the first author. All information, such as names, contact information, location, name of high school and university, and employer, through which interviewees' identities could be recognized, were removed from the data by the same author. Later, the second author collaborated with the first author to analyze the empirical data using an inductive approach. The two engaged in open dialogue and debate about the data interpretations and results. In this way, the research team ensured that there was no room for different interpretations.

In the analysis, we focused on determining the factors that helped the PWD to obtain work immediately after graduation and pinpointing their work orientations in the ICT sector.

4. Empirical study

Next, the empirical study is reported in two sections Sample and Results, and ends with Summary. Results is divided in two sub-sections (Networks and Competences and Work Orientations).

4.1. Sample

The empirical data included 13 male and eight female interviewees of different ages. The youngest interviewee was a 26-year-old man, and the oldest was a 67-year-old woman. They also had a high education level and a background in the ICT field. All interviewees were Finnish citizens with varying physical and/or sensory disabilities (see Table 3) due to a prenatal, perinatal, or postnatal condition or a progressive disease that caused their disability. A few required assistance, for example, in carrying heavy materials or reaching materials in high places. Others needed help in their daily activities; most did not require any help from other people.

Table 1. Interviewees' recent work situation.

Workplace type	No. of persons
Private sector	8
Public sector	4
Entrepreneur	2
Registered association	1
Retired	3
Unemployed	3
Total	21

The interviewees' work situations are presented in Table 1. Their full-time workplaces were in the public or private ICT sector, and two were entrepreneurs. Three were unemployed, and three were retired due to age. Two of the unemployed respondents attained full-time jobs soon after the interviews.

Table 2. Interviewees' ICT sector work experience.

ICT sector work experience	No. of persons
0–5 years	3
6–10 years	4
11–15 years	6
16–20 years	2
More than 20 years	6
Total	21

The participants' recent positions ranged from quality engineer to postdoc researcher and chief executive officer (CEO). Their titles are described in more detail in Figure 1. Table 2 presents the interviewees' work experience in terms of years in the ICT sector, ranging from 2 to 39 years. Interestingly, 12 of the 21 interviewees had worked at their first employer since graduation or even before they graduated. Table 2 shows that among the interviewees, there were people who had just started their career and those who already had several years' experience in the ICT sector.

4.2. Results

As described, research data were gathered through semi-structured interviews with 21 highly educated PWD. Interviewees' level of education varied from a PhD to no college degree. Altogether, 11 interviewees had higher university degrees. Seven had a lower university degree, and three had not yet graduated because they had entered full-time work while they were in school. The results are based on the content analysis of the interviews with 21 high educated PWD whose career at the time of the study was in the ICT sector. In the analysis, we focused on two areas: factors for getting started in a career and different work orientations during said career.

4.2.1 Networks and competences. Networks and competences were factors in entering the labor market. In the interviews, the importance of personal contacts and relationships was highlighted regarding the respondents' search for their first workplace. Networks were created during the respondents' school years with their peers. This was described in the following terms:

I had no problems getting a job, because almost all of my course mates had gone to work for the same company. My friends asked me to apply for a job, and all of them knew my disability.

I knew mates in the company where I applied… the company was aware of my disability, but they said that the most important thing was the business.

It was easy to get work, because I was a well-known person on campus.

My friend told me about an open workplace and said that I should send a job application. Then I was asked to come to a job interview.

The creation of relationships and networks with co-workers during internships was seen as helpful in getting a job after graduation. Internships give PWD an opportunity to demonstrate their workplace skills. The employer also has a chance to get to know the person and his or her contribution to work. During internships, it is also possible to assess how the individual's personal characteristics fit into that particular work

environment. Internships give the employer the opportunity to evaluate the possible limitations caused by the individual's disability. When PWD fulfill the competence demands and co-workers get to know them, there is less scope for prejudices, and the disability becomes insignificant. Disability itself is seen as neither an excuse nor a limitation. The question of self-esteem was also seen as important:

"I did a school project during the study years on the company, and then they asked me to come to a summer job and after that to work."

"I was in an internship during my study years in the same company where I work now. That is how I already had a connection to that company, so I just asked for a job after I graduated."

"I went to my latest employer in the spring term of my fourth year."

"Basic self-esteem is important so that you can convince your employer. You have to believe yourself that you can manage your tasks. Don't give the lead to others."

The interviewees also saw competences as an important factor in obtaining work after graduation. Our analysis revealed that PWD have two ways to prove their competence. First, they have the opportunity to convince their school mates of their competence during their school years. The second chance comes when they undertake internships at various companies. In the analysis, it was observed that PWD who were well aware of their own skills and the particular demands of ICT were able to focus their expertise and studies on their chosen profession. When doing so, they ensured their market value in the labor market:

"During the studies, you should think about what you want to do. Do you follow the mainstream, or do you want to do something else? If you want to go with the mass, you need to be as good as the others are. You can compensate for possible limitations by going into other trajectories where there are not that many professionals."

"PWD must be doubly better educated than non-disabled persons to get the same level of job. PWD are required more. When you get the first chance, you can be sure that you get the next opportunities."

"It's important to create a network during the study years, because you will quite probably work with the same persons with whom you have studied."

These people were liked, and their competence was known. They were asked to apply for a job by, for example, their fellow students or personnel from the firms where they had served their internships. They also thought that each student generation is a new generation to the work life. Two interviewees had faced problems getting a job after graduation and had received help from special employment programs organized by the state at some stage of their career.

4.2.2 Work orientations. In analyzing the work-related content of the interviews, we found the following five orientations: novice, technical, research, management, and entrepreneur. Within these orientations, there were horizontal and vertical directions. A horizontal direction denotes professional and continuing development in some specific chosen area, while a vertical direction often relates to changing work tasks and usually to more demanding tasks consisting of human resources management.

Table 3 shows that the PWD had various work orientations. Gender distribution is fairly even in terms of management and technical orientations.

Table 3. Work orientation, gender, and disability.

Orientation	Gender F/M		Disability
Novice	0	2	Muscular dystrophy Cerebral palsy
Research	2	0	Neuromuscular disease Congenital deficiencies
Technical	3	5	Cerebral palsy Short stature Multiple sclerosis Hearing or visual impairment
Management	3	4	Cerebral palsy Dysmelia Paraplegia Congenital and postnatal amputation
Entrepreneur	0	2	Hearing impairment Postnatal tetraplegia
Total	8	13	

Novices (n = 2) were recent graduates. They were the youngest respondents and had started entry-level positions in the ICT sector, such as salesperson and system administrator. Their work experience totaled around two years. They worked in entry-level positions, and they were not yet aware of what their main interest would be or whether they wanted to gain further competence in a vertical or horizontal direction.

Research-oriented (n = 2) respondents had six years and more of work experience. The younger was 32 and the older 56. Both had combined their studies, research, and work.

Technical-oriented (n = 8) respondents had five years and more of ICT work experience. Ages varied between 30 and 65 years. Their roles included application specialist, software engineer, and graphic

designer. Their formal qualifications ranged from a PhD to no college degree. Their work was mainly technical, and they had focused on developing their technical skills and competence in a specific area. They had mainly restructured their tasks in a horizontal direction.

Management-oriented (n = 7) respondents had 10 years or more of work experience. These employees were aged 31–67 years. They were product owners, senior project managers, development managers, and customer service managers. Work experience varied from 10 to 39 years. Their formal qualifications ranged from a PhD (technical) to a bachelor of engineering degree. They had restructured their jobs by changing their work content and transferring tasks to a vertical direction.

Entrepreneurs (n = 2) had started their career as technical specialists, before undertaking a vertical job restructuring by doing many different tasks. At the time of the interviews, these respondents were running their own businesses as entrepreneurs. They were aged 44 and 58.

Figure 2 illustrates the PWD's work orientations and job titles within the ICT sector.

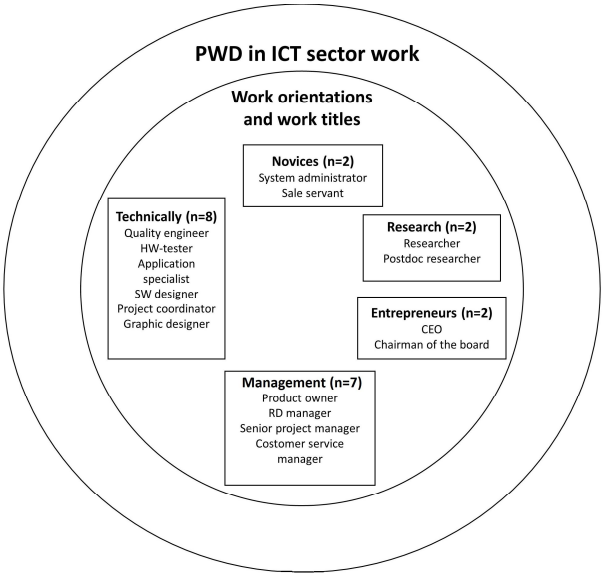

Figure 2. PWD and their work orientations.

Figure 2 reveals that of the ICT professionals, most were technically oriented with job titles such as quality engineer, HW tester, and application specialist. There were two entrepreneurs among the interviewees; likewise, there were two novices (in the early phase of their career) and two research-oriented persons (researchers).

4.3 Summary

Based on this research, the ICT sector appears to be full of opportunities for PWD. The disability itself is not seen as an issue; what is important is the person's competence and networks. Competence was seen as a PWD's capability to create networks and fulfill technical requirements. Therefore, we can summarize that only competence matters in the ICT field.

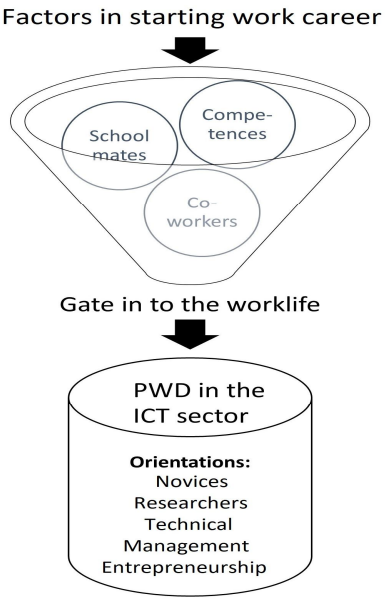

Figure 3. Factors of work life.

Figure 3 shows the factors required to embark on an ICT career. In the interviews, the college period was seen as an important time for creating networks with other students. Each student generation was seen as a new generation for the world of work. The importance of internship and relationships with co-workers were also seen as helpful in getting a job.

The ICT sector had offered the interviewees a full-time career. To take full advantage of that, they had to succeed in creating networks with schoolmates and co-workers during their education. They also had to convince their prospective employers of the competences they had developed in their schoolwork and internships. These factors helped the respondents through the bottleneck from school to the labor market.

The significance of the first workplace was obvious; after that, it was easier for the PWD to move forward in their careers. There are different work orientations in this field: novice, research, technical, management, and entrepreneur.

5. Discussion and conclusions

This research focused on the factors that helped 21 highly educated PWD gain employment in the ICT sector after graduation. In this section, the results are discussed in terms of how they relate to previous research.

Special employment programs, and their influence and relevance, have been reported in several papers [36,37]. According to these programs, the abilities and disabilities of PWD should be noted when determining a suitable duty and position for the jobseeker.

In the conceptual model of influences describing experiences of career development as perceived by female PWD, various features, such as identity constructs, self-belief, education, work attitudes, success strategies, and social movements, are listed [8]. Our interviews confirmed several similar features, as verified by references to the importance of self-esteem, believing in yourself, and education ("better educated than non-disabled"). As theoretical implications, the current study highlights the importance of the ability to create networks and competences on top of self-esteem and education as factors for getting successfully employed.

Heightened self-confidence, individualized and holistic advisory procedures, education, and matching of strengths and interests with employment opportunities were identified as factors in becoming employed by Crawford [37]. Baumberg [7], meanwhile, talked about "systematic advantages" that help PWD find work. According to Baumberg, labor market inequalities are examples of such systematic advantages and can be seen as signs of job flexibility and possibilities of changing to a more suitable job.

Networks, competence, and the ICT boom were important factors that helped PWD's employment chances [6]. In the present research, meanwhile, as a factor for highly educated PWD, we found that two competences were needed to access work in the ICT sector. The careers of the PWD we interviewed made it possible to define five work orientations.

The two competences comprise the ability to create networks and to be competent in technical expertise. Networks with schoolmates and co-workers during internships were seen as meaningful in gaining one's first job in the ICT sector. These interviewees had been able to create social capital for themselves by creating networks. The importance of social capital is a valuable resource in access to community [21-23].

The PWD's disability had become familiar to their schoolmates and colleagues while they worked together during internships. Therefore, the disability itself had become insignificant, and the worker's personal characteristics were more important. This key process compromised the need to build special models to analyze potential decisions to hire PWD or to point out disability as a topic for wider discussion (see e.g. [6]). In addition, technical competence was seen as a crucial factor. A work life requires high expertise. Based on these conclusions, we claim that only competence matters.

Therefore, as an important practical implication, the current study emphasizes the need to encourage young PWD and the ICT sector to create a wide range of work possibilities over time despite the candidates' physical or sensory limitations, and those who are hiring employees to focus on competence and pay less attention to disabilities.

In this research, the interviewees' work content was analyzed to infer five orientations: novice, technical, research, management, and entrepreneur. These orientations show that PWD can work in many positions in the ICT sector. Despite very serious disabilities, these people were able to work on demanding tasks. Competence was a stepping stone to the career ladder. As one of the interviewees stated, "Don't give the lead to others."

The current study analyzed career paths and work tasks of the PWD while previous literature appeared modest regarding career development of the PWD.

One limitation of this research is part of the methodology. Interviews are invariably interaction and communication situations, in which researchers and interviewees create a confidential and trustful relationship (see 4.g. [49]). One can never be sure how truthful people are. In addition, a disability can be a sensitive matter, and some issues might be difficult to talk about. Another limitation is that we found only interviewees who had been competent enough to get a full-time job.

Based on these results, we presume that 21 highly educated PWD working full-time in the ICT sector are a satisfactory number of interviewees. However, in Finland, with a population of about 5.5 million, 21 highly educated PWD in the required sector can be seen adequate for the study. Had we had more participants, the results may have been more nuanced. The strengths of these research data are that the interviewees were of different ages and genders, with a wide range of disabilities and work experience.

A significant asset for the reliability of the empirical research material is that the first author is a person with a physical and sensory disability. He conducted all the interviews and met almost all interviewees face-to-face. The atmosphere in the interviews was trusting and confidential.

The research problem of the current study could also be answered in wider environments. In a future study, we could ask the same research questions in

other countries, because in this research the focus was on Finnish citizens. In addition, it would be interesting to gain more knowledge about attitudes toward co-workers with physical and/or sensory disabilities in companies in the ICT sector.

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